

ABSTRACT

Disclosed is a method for forming a Re-Cr alloy film consisting of Re in the range of 60 to 90% by atomic composition. The method comprises performing an electroplating process using an electroplating bath containing an aqueous solution which includes a perrhenate ion and a chromium (IV) ion. The present invention allows a Re-Cr alloy film usable as a corrosion-resistant alloy coating for a high-temperature component or the like to be formed through an electroplating process using an aqueous solution, so as to provide heat/corrosion resistances to the component, even if it has a complicated shape, in a simplified manner at a low cost.